Explorations in Modern Math MWF 9:55

Quiz 1

In the (original) Pennies and Paperclips game, if the pennies are placed in the same colored squares, then Penny will win.

Proof: This is because one of the rules of the game is that each paperclip must occupy adjacent squares. The original board is set up in a checkered style, so the same colors only touch each other diagonally. When Paperclip moves, the only option in the game is to take up two squares of different colors. When Penny is on two squares of the same color, they leave two of the same color squares where Paperclip can't occupy them. It doesn't matter if the pennies are close to each other or far away on the board. When playing the game multiple times, wherever the pennies are on the board, Penny can always win if the pennies are on two squares of the same color.